UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/760,752	01/17/2001	William R. Bullman	20-164	4815

7590 07/19/2004

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EXAMINER
BARNES, CRYSTAL J

ART UNIT	PAPER NUMBER
2121	5

DATE MAILED: 07/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 January 2001*.
2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-29* is/are pending in the application.
   4a) Of the above claim(s) *24-29* is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) *1-4,8,16 and 20* is/are rejected.
7)☒ Claim(s) *5-7,9-15,17-19 and 21-23* is/are objected to.
8)☒ Claim(s) *1-29* are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☒ The drawing(s) filed on *04 April 2001* is/are: a)☐ accepted or b)☒ objected to by the Examiner.
   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a)☐ All b)☐ Some * c)☐ None of:
      1.☐ Certified copies of the priority documents have been received.
      2.☐ Certified copies of the priority documents have been received in Application No. _____.
      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
         application from the International Bureau (PCT Rule 17.2(a)).
   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)
1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1.   The following is an initial Office Action upon examination of the

above- identified application on the merits. Claims 1-29 are pending in this

application.

Election/Restrictions

2.   Restriction to one of the following inventions is required under 35

U.S.C. 121:

I.   Claims 1-23, drawn to maintaining data-based link integrity in a

powered down network device, are classified in class 713,

subclass 324.

II.   Claims 24-29, drawn to providing both physical and data-based

link integrity capability in a network, are classified in class 709,

subclass 250.

The inventions are distinct, each from the other because of the following

reasons:

3.   Inventions I and II are related as subcombinations disclosed as usable

together in a single combination. The subcombinations are distinct from

each other if they are shown to be separately usable. In the instant case,

invention II has separate utility such as providing both physical and non-

physical data-based link integrity modes in a network. See MPEP §

806.05(d).

4.   Because these inventions are distinct for the reasons given above and

have acquired a separate status in the art as shown by their different

classification, restriction for examination purposes as indicated is proper.

5.   Because these inventions are distinct for the reasons given above and

the search required for Group I is not required for Group II, restriction for

examination purposes as indicated is proper.

6.   During a telephone conversation with William H. Bollman, Reg. No.

36,457 on 24 June 2004, a provisional election was made with traverse to

prosecute the invention of Group I, claims 1-23. Affirmation of this election

must be made by applicant in replying to this Office action. Claims 24-29

are withdrawn from further consideration by the examiner, 37 CFR 1.142(b),

as being drawn to a non-elected invention.

7.   Applicant is reminded that upon the cancellation of claims to a non-

elected invention, the inventorship must be amended in compliance with 37

CFR 1.48(b) if one or more of the currently named inventors is no longer an

inventor of at least one claim remaining in the application. Any amendment of

inventorship must be accompanied by a request under 37 CFR 1.48(b) and by

the fee required under 37 CFR 1.17(i).

Drawings

8.   The drawings are objected to as failing to comply with 37 CFR

1.84(p)(5) because they include the following reference character(s) not

mentioned in the description: reference numbers 108 in figures 1 and 2 and

202 and 204 in figure 2 are not mentioned in the specification. Corrected

drawing sheets, or amendment to the specification to add the reference

character(s) in the description, are required in reply to the Office action to

avoid abandonment of the application. Any amended replacement drawing

sheet should include all of the figures appearing on the immediate prior

version of the sheet, even if only one figure is being amended. The figure or

figure number of an amended drawing should not be labeled as "amended."

If a drawing figure is to be canceled, the appropriate figure must be

removed from the replacement sheet, and where necessary, the remaining

figures must be renumbered and appropriate changes made to the brief

description of the several views of the drawings for consistency. Additional

replacement sheets may be necessary to show the renumbering of the

remaining figures. The replacement sheet(s) should be labeled "Replacement

Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any

portion of the drawing figures. If the changes are not accepted by the

examiner, the applicant will be notified and informed of any required

corrective action in the next Office action. The objection to the drawings

will not be held in abeyance.

Claim Rejections - 35 USC § 102

9.   The following is a quotation of the appropriate paragraphs of 35

U.S.C. 102 that form the basis for the rejections under this section made in

this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

10.   Claims 1-4, 8, 16 and 20 are rejected under 35 U.S.C. 102(e) as being

anticipated by USPN 6,092,207 to Kolinski et al.

As per claim 1, the Kolinski et al. reference discloses a network

device, comprising: a core processor (see column 3 lines 30-33, "host

processor 285") and core memory (see column 3 lines 35-40, "memory

controller, DRAM memory array 265"); and a link integrity module (see

column 3 lines 51-63, "power management device 280") in communication with

said core processor ("host processor 285"), said link integrity module

("power management device 280") being powered (see column 2 lines 54-56,

"main voltage converter 215" and column 4 lines 49-54, "standby converter

220") separately from said core processor ("host processor 285") and said

core memory ("memory controller, DRAM memory array 265"); said network

device (see column 4 lines 56-61, "computer 300") including a D3 type cold

power mode (see column 3 lines 51-62, "power saving modes") wherein said

link integrity module ("power management device 280") maintains power (see

column 4 lines 51-54, "always receives sufficient power").

As per claim 2, the Kolinski et al. reference discloses in said D3 type

cold power mode ("power saving mode"), said network device ("computer

300") removes power (see column 3 lines 51-54, "main voltage converter

215") from said core memory ("memory controller, DRAM memory array

265").

As per claim 3, the Kolinski et al. reference discloses in said D3 type

cold power mode ("power saving mode"), said network device ("computer

300") removes power (see column 3 lines 51-54, "main voltage converter

215") from said core processor ("host processor 285").

As per claim 4, the Kolinski et al. reference discloses further

comprising: a network interface (see column 5 lines 4-10, "LAN controller

337, modem 339").

As per claim 8, the Kolinski et al. reference discloses said network

device ("computer 300") is a wired device.

As per claim 16, the Kolinski et al. reference discloses a method of

maintaining data-based link integrity in a powered down network device,

comprising: providing a link integrity module (see column 3 lines 51-63,

"power management device 280") powered separately (see column 2 lines 54-

56, "main voltage converter 215" and column 4 lines 49-54, "standby

converter 220") from core functionality (see column 3 lines 30-33, "host

processor 285") in said network device (see column 4 lines 56-61, "computer

300"); and removing power (see column 3 lines 51-54, "main voltage converter

215") from said core functionality ("host processor 285") of said network

device ("computer 300") while maintaining power (see column 4 lines 51-54,

"always receives sufficient power") to said separately powered link integrity

module ("power management device 280").

As per claim 20, the Kolinski et al. reference discloses an apparatus

for maintaining data-based link integrity in a powered down network device,

comprising: means for providing a link integrity module (see column 3 lines

51-63, "power management device 280") powered separately (see column 2

lines 54-56, "main voltage converter 215" and column 4 lines 49-54, "standby

converter 220") from core functionality (see column 3 lines 30-33, "host

processor 285") in said network device (see column 4 lines 56-61, "computer

300"); and means for removing power (see column 3 lines 51-54, "main voltage

converter 215") from said core functionality ("host processor 285") of said

network device ("computer 300") while maintaining power (see column 4 lines

51-54, "always receives sufficient power") to said separately powered link

integrity module ("power management device 280").

11.   Claims 1-4, 16 and 20 are rejected under 35 U.S.C. 102(a) as being

anticipated by USPN 6,282,666 B1 to Bays et al.

As per claim 1, the Bays et al. reference discloses a network device, comprising: a core processor (see column 4 lines 14-16, "main circuit 204") and core memory (see column 4 lines 60-64, "buffer memories"); and a link integrity module (see column 4 lines 25-29, "auxiliary circuit 206") in communication with said core processor ("main circuit 204"), said link integrity module ("auxiliary circuit 206") being powered (column 3 lines 45-50, "main power supply, auxiliary power supply") separately from said core processor ("main circuit 204") and said core memory ("buffer memories"); said network device ("peripheral device") including a D3 type cold power mode (see column 4 line 29, "D3 cold state") wherein said link integrity module ("auxiliary circuit 206") maintains power (see column 5 lines 37-39, "maintained by the auxiliary power").

As per claim 2, the Bays et al. reference discloses in said D3 type cold power mode ("D3 cold state"), said network device ("peripheral device") removes power (see column 3 lines 53-57, "cessation of the main power supply") from said core memory ("buffer memories").

As per claim 3, the Bays et al. reference discloses in said D3 type cold power mode ("D3 cold state"), said network device ("peripheral device")

removes power (see column 3 lines 53-57, "cessation of the main power

supply") from said core processor ("main circuit 204").

As per claim 4, the Bays et al. reference discloses further comprising:

a network interface (see column 4 lines 10-12, "peripheral controller 118" and

column 4 lines 20-22, "bus interconnect 202").

As per claim 16, the Bays et al. reference discloses a method of

maintaining data-based link integrity in a powered down network device,

comprising: providing a link integrity module (see column 4 lines 25-29,

"auxiliary circuit 206") powered separately (column 3 lines 45-50, "main

power supply, auxiliary power supply") from core functionality (see column 4

lines 14-16, "main circuit 204") in said network device ("peripheral device");

and removing power (see column 3 lines 53-57, "cessation of the main power

supply") from said core functionality ("main circuit 204") of said network

device ("peripheral device") while maintaining power (see column 5 lines 37-

39, "maintained by the auxiliary power") to said separately powered link

integrity module ("auxiliary circuit 206").

As per claim 20, the Bays et al. reference discloses an apparatus for

maintaining data-based link integrity in a powered down network device,

comprising: means for providing a link integrity module (see column 4 lines

25-29, "auxiliary circuit 206") powered separately (column 3 lines 45-50,

"main power supply, auxiliary power supply") from core functionality (see

column 4 lines 14-16, "main circuit 204") in said network device ("peripheral

device"); and means for removing power (see column 3 lines 53-57, "cessation

of the main power supply") from said core ("main circuit 204") of said

network device ("peripheral device") while maintaining power (see column 5

lines 37-39, "maintained by the auxiliary power") to said separately powered

link integrity module ("auxiliary circuit 206").

Allowable Subject Matter

12.   Claims 5-7, 9-15, 17-19 and 21-23 are objected to as being dependent

upon a rejected base claim, but would be allowable if rewritten in

independent form including all of the limitations of the base claim and any

intervening claims.

Conclusion

13.   The prior art made of record and not relied upon is considered

pertinent to applicant's disclosure.

The following references are cited to further show the state of the

art with respect to conserving/managing power in network devices in general:

USPN 5,579,524 to Kikinis

USPN 6,105,096 to Martinelli et al.

USPN 6,393,570 B1 to Henderson et al.

USPN 6,460,106 B1 to Stufflebeam

USPN 6,473,810 B1 to Patel et al.

USPN 6,510,524 B1 to Osborn et al.

USPN 6,523,073 B1 to Kammer et al.

USPN 6,606,712 B1 to Miura

USPN 6,654,614 B2 to Morris et al.

USPN 6,658,576 B1 to Lee

USPN 6,751,676 B2 to Fukuhara

Any inquiry concerning this communication or earlier communications

from the examiner should be directed to Crystal J. Barnes whose telephone

number is 703.306.5448. The examiner can normally be reached on Monday-

Friday alternate Mondays off.

If attempts to reach the examiner by telephone are unsuccessful, the

examiner's supervisor, Anthony Knight can be reached on 703.308.3179. The

fax phone number for the organization where this application or proceeding

is assigned is 703-872-9306.

Information regarding the status of an application may be obtained

from the Patent Application Information Retrieval (PAIR) system. Status

information for published applications may be obtained from either Private

PAIR or Public PAIR. Status information for unpublished applications is

available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on

access to the Private PAIR system, contact the Electronic Business Center

(EBC) at 866-217-9197 (toll-free).

Anthony Knight
Supervisory Patent Examiner
Group 3600

cjb
10 July 2004